

## For More Information

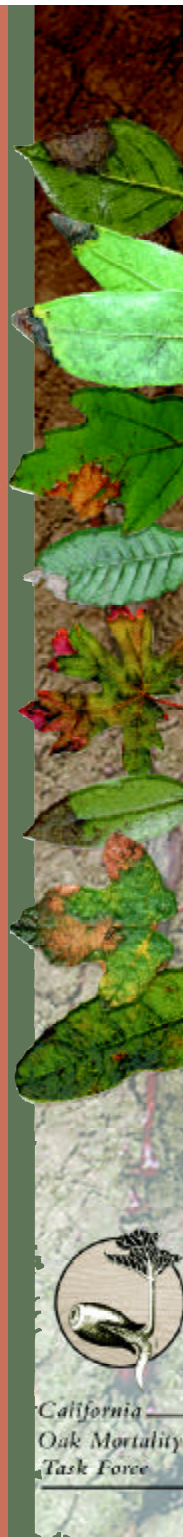
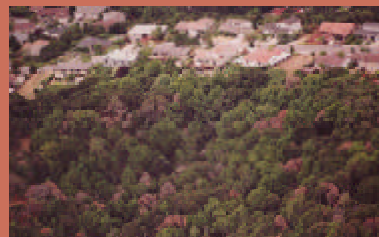
The California Oak Mortality Task Force (COMTF) brings together over 1000 members from over 80 organizations, including public agencies, non-profit organizations, and private interests, to address the issue of elevated levels of oak mortality. The Task Force facilitates a comprehensive and unified approach for research, management, education, and public policy.

A comprehensive look at Sudden Oak Death, as well as more information on COMTF, can be found on the Task Force website at:

[www.suddenoakdeath.org](http://www.suddenoakdeath.org)

Your logo here

# Stop the Spread of Sudden Oak Death



## You Can Help Stop the Spread!

At this time the best defense against Sudden Oak Death is to follow the regulations and best management practices that are in place to help slow the “artificial” or human-mediated spread of the disease.

☞ State and federal regulations must be complied with when moving host plant material and other regulated materials within and from regulated counties. Contact your local County Agricultural Commissioner for the most up-to-date regulations.

☞ Stay on established trails and respect trail closures.

☞ Before leaving infested areas, clean soil and mud that could carry host material from:

- ☞ shoes
- ☞ horses' hooves
- ☞ vehicles
- ☞ mountain bikes
- ☞ pets' paws

☞ Clean and disinfect equipment (saws, shovels, pruning equipment, etc.) that has been used in infested areas.

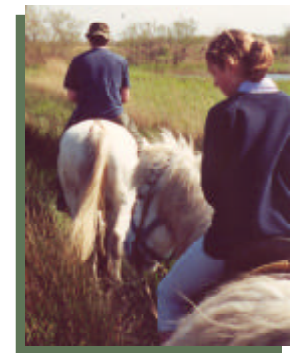
☞ Report hosts exhibiting symptoms to your local County Agricultural Commissioner, California Department of Forestry and Fire Protection, or UC Cooperative Extension.

**At [www.suddenoakdeath.org](http://www.suddenoakdeath.org) you can:**

☞ Familiarize yourself with associated plants and their symptoms.

☞ Stay current on quarantines and best management practices to minimize disease spread.

☞ And much, much more...



# What you need to know about Sudden Oak Death

Since 1995, native oaks have been dying in California's coastal counties due to a disease known as Sudden Oak Death. This disease is caused by the pathogen *Phytophthora ramorum*. The pathogen can also infect a number of other plants, referred to as hosts of the disease. Confirmed cases of Sudden Oak Death have been reported in the coastal counties of central and northern California. All confirmed counties are required to follow State and federal regulations when handling or transporting host material. Your local County Agricultural Commissioner can provide you with up-to-date regulations. For a current list of regulated counties, as well as a complete list of regulated host plants, go to [www.suddenoakdeath.org](http://www.suddenoakdeath.org).

Sudden Oak Death infections are often fatal on tanoak, coast live oak, California black oak, canyon live oak, and Shreve oak. *Phytophthora ramorum* primarily attacks the tree's vascular system just below the bark, girdling the tree. The vascular system is the "plumbing" that transports nutrients and water throughout the tree. A tree infected with the pathogen is weakened and may also be attacked by other tree pests, such as bark beetles and decay fungi.

## Symptoms

**Oaks and Tanoaks** - An early symptom on oaks may be the "bleeding" of a thick sap that appears on the bark surface. Other diseases and injuries may also cause similar symptoms.

Underneath the bleeding bark there is a canker with dark patches of infected tissue surrounded by healthy tissue. Cankers and bleeding usually occur on the trunk within ten feet from the ground.

**Foliar Hosts** - Other than the oaks, plants infected with *Phytophthora ramorum* most often show symptoms of leaf spots

and twig dieback, and are considered foliar hosts. Pathogen spores can build up rapidly on the leaves of these hosts. California bay laurel (*Umbellularia californica*) is a foliar host that appears to play a significant role in the distribution of *Phytophthora ramorum* spores.

Laboratory culture of *Phytophthora ramorum* is needed to confirm the diagnosis of Sudden Oak Death since many other agents\* cause similar symptoms. For diagnostic assistance, please contact your local County Agricultural Commissioner or University of California Cooperative Extension (UCCE).

*\*NOTE: Not all bleeding on oak trunks is indicative of Sudden Oak Death. Other causal agents such as Phytophthora cinnamomi, wet wood, Armillaria, or insects may be responsible and cause similar symptoms.*

## Management

The best defense against Sudden Oak Death is to use good management and sanitary practices:

✂✂ Clean and disinfect all pruning, cutting, and chipping tools with a household disinfectant (such as Lysol, ethanol, or diluted bleach) after pruning host plants.

✂✂ Monitor oaks for bleeding symptoms year round. If bleeding symptoms are detected, seek confirmation that the cause is *Phytophthora ramorum* by contacting your County Agricultural Commissioner or UCCE.

✂✂ If you are in an infested county, do not move host material to uninfested areas. If host material must be removed from your property, it should be disposed of at a local landfill or transported to an approved collection facility.



Dead tanoak, Big Sur



Bleeding on coast live oak



Canker on coast live oak



Leaf spots on California bay laurel



Leaf spots on Rhododendron



Phytophthora ramorum in the laboratory



Disinfect equipment after working with host plants